Clarion

SERVICE MANUAL

Closer Relations through "CLARION SERVICE MANUAL"

MODEL G-80D(GD-503E)

Manufacturer CLARION CO., LTD. / Export Division CLARION SHOJI CO., LTD.
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■SPECIFICATIONS:

Reproduction system:	4 track, 2 channel, 2 program stereo cassette deck (Monaural tape playable)
Wow and flutter:	Less than 0.15%
Tape speed:	4.75cm/s
Separation:	More than 30dB
Crosstalk:	More than 40dB
S/N ratio:	DOLBY NR off More than 52dB DOLBY NR on More than 62dB (CrO_2 position)
Output impedance:	Less than 1kΩ
Output level:	600mV (at 10kΩ load)
Power supply voltage:	DC 14V Negative ground
Current consumption:	400mA Less than 5A (at plunger operated)
Dimensions:	Width 140mm Height 50mm Depth 170mm
Weight:	1.67kg

* Noise reduction system manufactured under licence from Dolby laboratories.
* Dolby and "DD" mark are the trade name and trade mark of the Dolby Laboratories.

Printed in Japan 298-2491-00 GD-503E

■COMPONENTS:

	Main unit	1
300-4976-00	Mounting bracket	1
300-5074-00	Mounting bracket	1
852-5749-00	Extension lead	1
852-5785-00	Extension lead	1
921-7032-00	Parts bag	1
700-5016-10	Tap screw (M5x16)	3
725-0181-00	Plate nut (M5)	3
734-5010-31	D-sems hex-bolt (M5x10)	3
740-5000-10	Flat washer (M5)	3

■FEATURES:

- DOLBY NR system incorporated.
- Tape selector.

■ADJUSTMENTS:

■Electrical Circuit

1. Adjusting Dolby level

Play the test tape CTT-422-112 maked Clarion (400Hz, 200nWb/m) and adjust VR1 (VR2) and VR6 (VR5) so that the voltage at TP3 and TP4 becomes 775mV.
(Dolby NR switch: OFF)

2. Adjusting playback frequency response

① Play the test tape CTT-422-105 (315Hz, −10VU) and take the voltage at the DIN terminals or at TP3, TP4 as reference.

② Play the test tape CTT-422-113 maked Clarion (8kHz, −10VU) and adjust VR3, VR4 so that the level becomes the same as in item 1 above.
(Tape Selector: NORM, Dolby NR switch: OFF)

③ Next switch the Tape Selector to the CrO_2 position and verify that the output of 8kHz decreases by about 4dB.

3. Adjusting Dolby NR effective width

① Insert an empty pack into the deck to turn on the electrical circuit.

② Set the CR oscillator frequency to 5kHz and feed this signal to TP1 (TP2).

③ Adjust the output of the oscillator so that the level at TP3 (TP4) becomes 59mV when the Dolby NR switch is set to the OFF position.

④ With the Dolby NR switch set to the ON position, adjust VR7 to set the level 8dB below that of item ③ above.
(Tape Selector: NORM)

■METHODS OF ADJUSTMENT:

1. HOW TO ADJUST THE HEAD AZIMUTH

* If the angle of the head against the recording tape is incorrect, it may become one of the causes of problems such as the deterioration in the sound quality or the crosstalk.
Adjust the angle of the head, if incorrect, in the following manner.

1) Play back test tape 315Hz−15VU at the maximum volume, and set correct balance with the balance volume.

2) Play back test tape 8KHz−10VU.
Turn the azimuth adjusting screw to attain the output level in the vicinity of the maximum level in both the forward and reverse direction. (See Fig. 1)

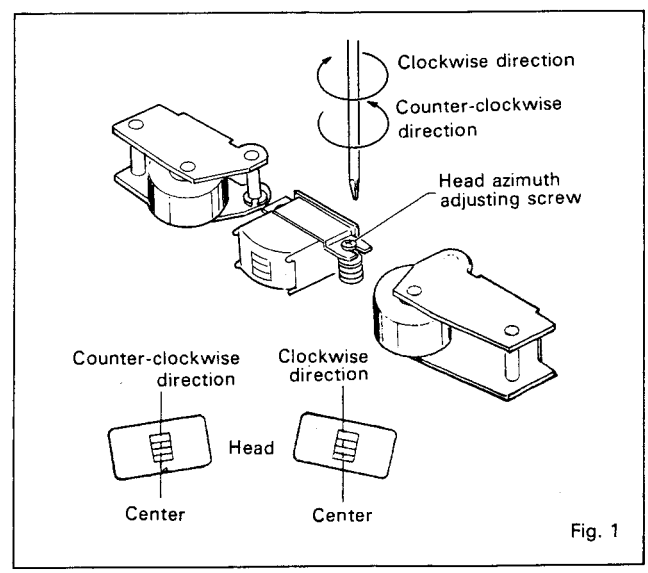


Fig. 1

2. HOW TO ADJUST THE CHANNEL SELECTOR SWITCH (013-3397-00)

* If ONE-SIDE is not played, crosstalk appears, or the playing indicator lamp lights simultaneously reversing the direction of playback, and if such problems are judged to be caused by the imperfect contact of the selector switch, loosen the screws fitting P.W. board to which the switch is attached.
  Shift P.W. board with the switch mounted upon to right and left to adjust.
  Fix with the screw lock upon completion of the adjustment. (See Fig.2)

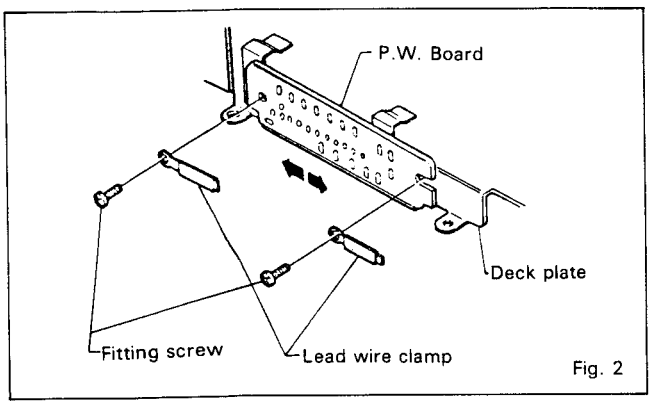


Fig. 2

3. HOW TO ADJUST THE PLUNGER POSITION FOR THE AUTO-REVERSE SWITCH-OVER

* If the defective switch-over operation is proved to be due to the position of the plunger, loosen the two screws fitting the plunger and shift the plunger back and forth for adjustment. Confirm the switch-over operation for both the forward and reverse direction upon completion of the adjustment. (See Fig. 3)

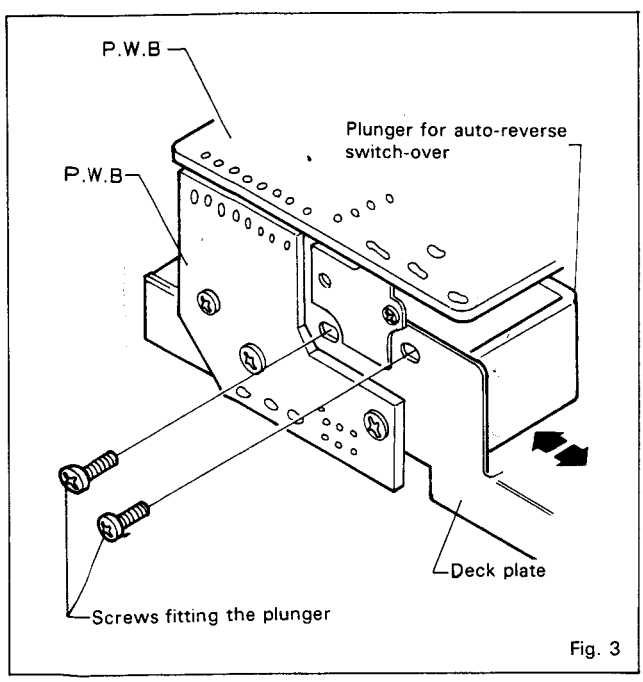


Fig. 3

4. HOW TO ADJUST THE LOCK POSITION OF THE OPERATING LEVER

* If the imperfect locking of the operating lever is judged to be due to the incorrect position of the plunger for the lock, adjust it in the following manner.
  1) Remove spring.
  2) Keep the power supply for mechanism ON.
  3) Leave the mechanism in STOP state without applying pack. (not EJECT)
  4) Loosen the two screws for adjusting the lock position of the operating lever.
     (If the screwlock is stuck and interfere with the adjustment, remove the screwlocks.)
  5) Press the REW lever as far as it goes.
  6) Tighten the two screws for adjusting the lock position of the operating lever in the above state.
  7) Fit the spring.
  8) Check the REW lever, PLAY lever in addition to the FF lever.
  9) Apply screw-lock on completion of adjustment. (See Fig. 4)

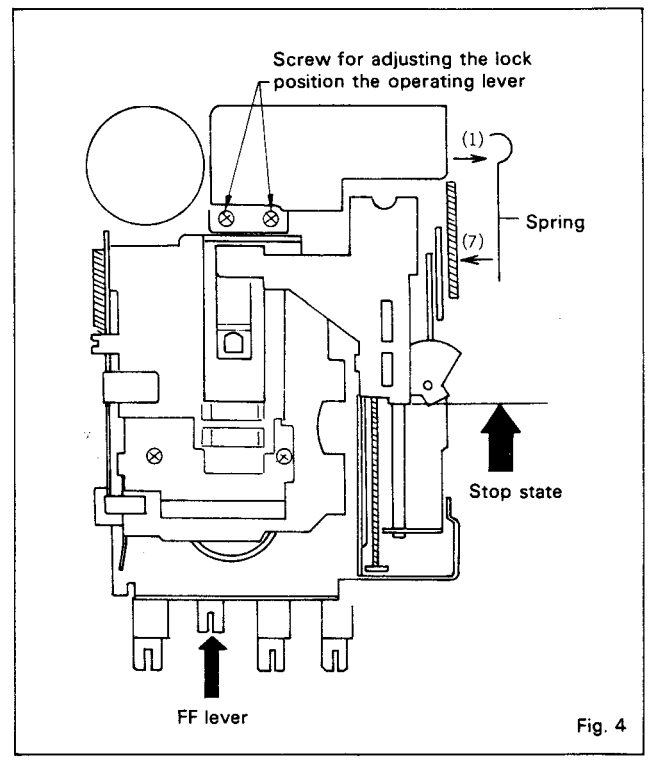


Fig. 4

5. HOW TO ADJUST THE POWER SWITCH (013-3476-00)

* When power is not applied even when the operating lever is pushed and faulty adjustment of the power switch (013-3476-00) is judged to be the cause, adjust by bending the adjustment pawl of the lock arm ass'y (960-3177-03) with radio plier. (Adjust so that the gap of the adjustment pawl of the lock arm ass'y is about 0.1~0.3mm when the actuation is lightly moved in direction A from the lever fully pushed state.) (See Fig.5)

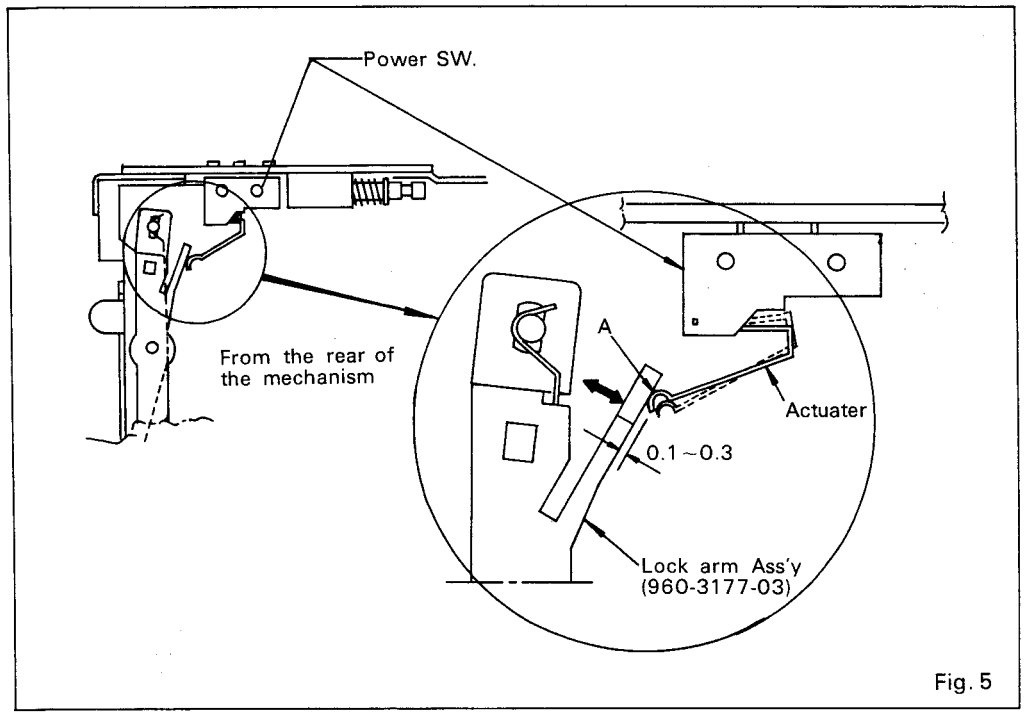


Fig. 5

6. HOW TO ADJUST PLAY AND FF/REW SELECTOR SWITCH (013-3444-01)

* If the auto-stop is not accomplished at FF/REW tape end, and the cause is judged to be the selector switch (013-3444-01), adjust by bending the switch plate B ass'y with radio plier, etc. (See Fig. 6)

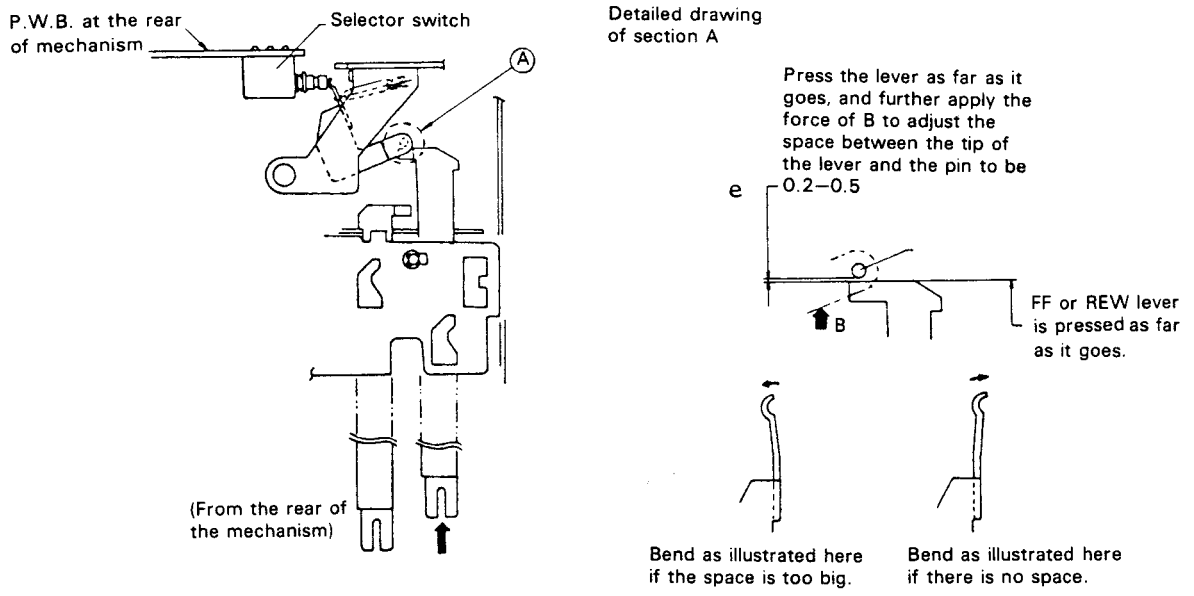


Fig. 6

7. ADJUSTMENT OF GEAR

* If the periodical strange noise is heard during playback, adjust the gear engagement in the following manner.
  1) Check if the noise if generated on Fow side or Rev side.
  2) Adjust by bending the clip (A) if the noise if heard on Fow side, and (B) for Rev side, respectively. (See Fig. 7)

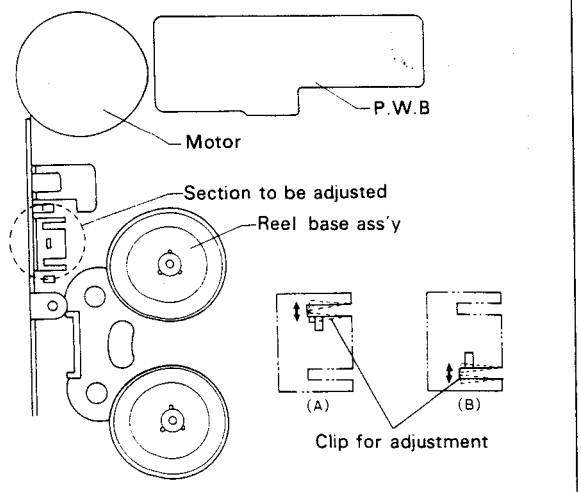


Fig. 7

* If FF/REW selector switch is defective (no switch-over operation accomplished), adjust the clip outwardly. (See Fig. 8)

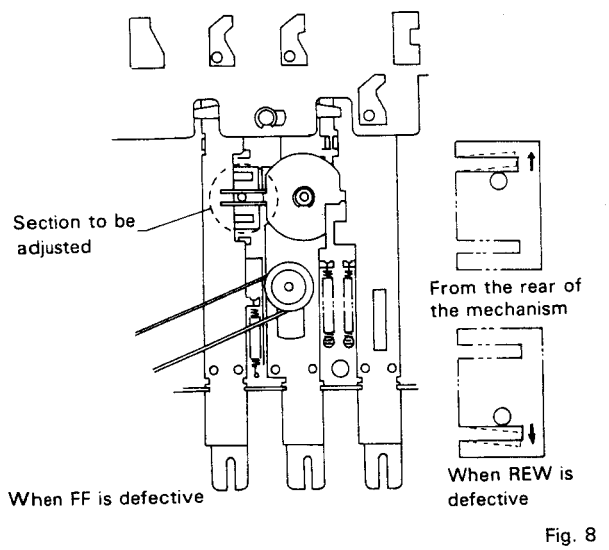


Fig. 8

8. HOW TO ADJUST THE PACK SUCTION MECHANISM

* If the pack suction mechanism does not work when inserting the pack or at the time of eject (inserting force of the pack becomes extremely light but is not sucked), and the cause is judged to be the improper position of the rack and gear plate engagement, adjust the position in the following manner.

1) Loosen the two screws (pan-head screws) fitting the rack (Do not turn by more than one rotation).
2. Shift the rack backward as viewed from the slide plate to adjust.
3) Insert the pack, and confirm that there exists a space between the rear end of the slide plate and the rising part of the rack. (If there is no space, the eject power increases. Re-adjust as described in (2). (See Fig. 9)

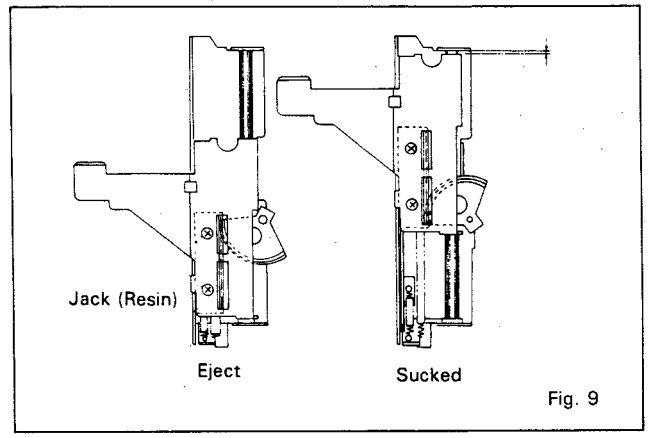


Fig. 9

■HOW TO REMOVE/FIT VARIOUS MECHANISMS:

*** See the drawing of disassembly.**

1. HOW TO REMOVE EJECT MECHANISM

1) Keep the mechanism in STOP state. (Note: not "eject" state, but it is necessary to keep in the same state as when the pack is inserted . . . . . push the slide plate and drop the pack guide.)
2) Remove the spring (750-1926-02).
3) Remove 3 machine screws (714-2603-81).
4) Slightly move the whole eject mechanism to the right and left to remove (See Fig. 10).

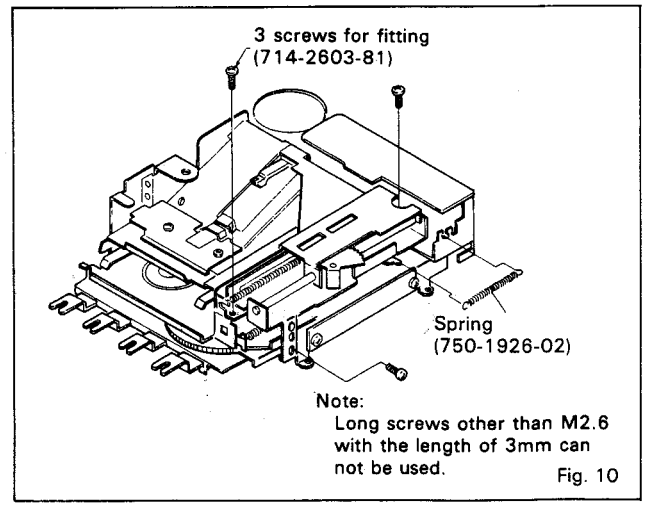


Fig. 10

2. HOW TO FIT EJECT MECHANISM

1) Press the change plate (960-3163-00) to the rear of the mechanism and leave on Fow side.
2) Fit the eject mechanism in such a manner that the respective pins fit in the horizontal hole of the guide arm (960-3166-03) and U-shape-groove of the eject link with the slide plate pressed.
3) Fix 3 machine screws (714-2603-81).
4) Apply the spring (750-1926-02) (See Fig. 10).
5) Fix the tape counter matching to the square hole of the deck plate and the dowel of the frame Ass'y with machine screws.

3. HOW TO REMOVE THE PACK GUIDE UNIT

1) Remove the eject mechanism in the method described in (1).
2) Remove the spring (750-1923-03).
3) Keep the pack guide unit horizontal (the same state as "eject") and slightly shift to the right to remove. (See Fig. 11-A).

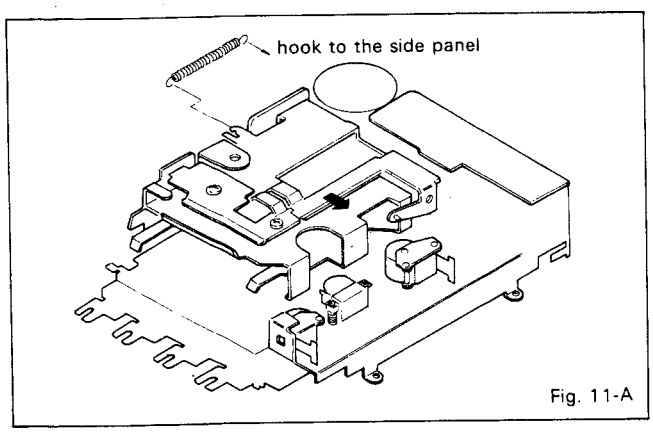


Fig. 11-A

4. HOW TO FIT THE PACK GUIDE UNIT

1) Keep the pack guide unit horizontal (the same state as "eject") and insert the pin of the side panel (960-3161-03) to the hole of the guide arm.
2) Drop the pack guide, and apply the spring to the spring hook of the guide arm.
3) If the position of the pack guide does not match the imprinted marking, adjust after fitting the eject mechanism (See Fig. 11-B).

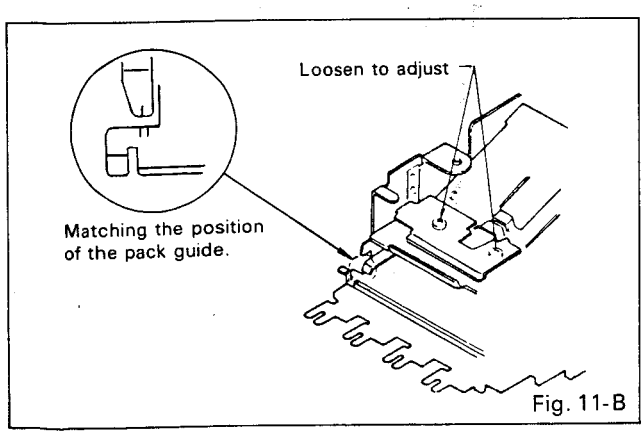


Fig. 11-B

5. HOW TO REMOVE LEVER MECHANISM (960-3184-03, bottom sub Ass'y)

1) Then place the mechanism with its rear surface facing to top, and remove spring (750-1927-03), (750-1950-00), (750-1951-00).
2) Remove 4 machine screws (714-2603-81).
3) Lift the hole lever mechanism and remove (See Fig. 12).

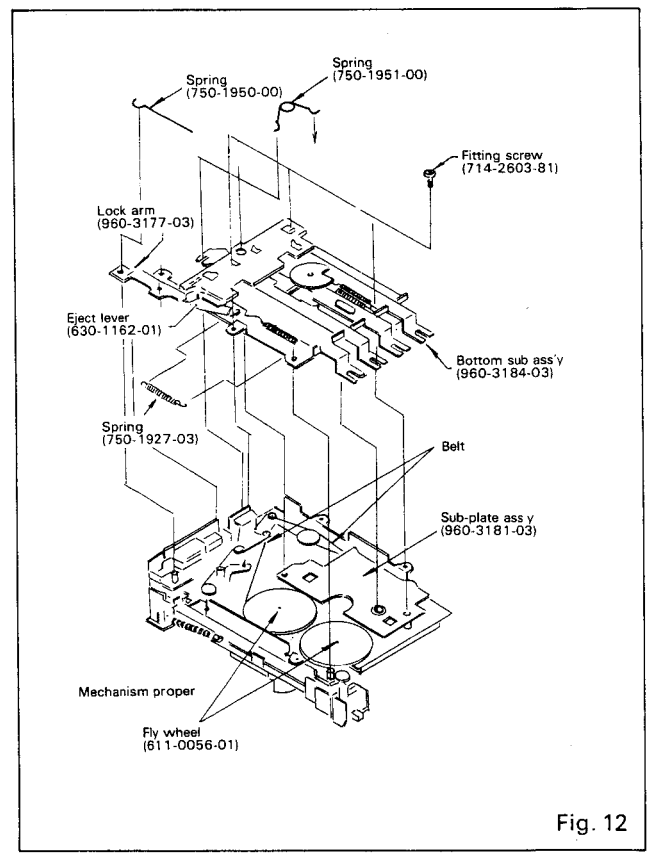


Fig. 12

6. HOW TO FIT THE LEVER MECHANISM (960-3184-07, bottom sub ass'y)

1) Confirm that the sub-plate ass'y is not pushed up. (Both the guide holes should be fit to the pins of the deck.)
2) Preassemble the bottom-sub ass'y to the eject lever (630-1162-02).
3) Fit the whole bottom sub ass'y to the mechanism. Carry out the following at this point.
   a) Match U-shape groove of the play lever to the play link Ass'y pin
   b) Fit the circular hole of the eject lever (630-1162-02) to the eject link shaft

4) Match the fitting position of the bottom a sub ass'y and fix with 4 machine screws (714-2603-81).
5) Fit the lock arm ass'y (960-3177-03). Match the lock panel pin and SW lever Ass'y (960-3175-02) pin to the respective hole, and fix with E-ring.
6) Fit the springs (750-1927-03), (750-1950-00) and (750-1951-00).

7. HOW TO REPLACE WHOLE IC

* If the reverse rotation of auto-reverse is judged to be caused by the defective IC, replace in the following manner (Replace whole IC in P.W.B. Ass'y).
  1) Remove the eject mechanism and pack guide unit (See Fig. 10, Fig. 11-a).
  2) Remove the bottom sub ass'y (See Fig. 12).
  3) Remove the fly wheel and belt.
  4) Remove the soldering from the three wiring of P.W.B. and whole IC.
  5) Lift as fitted to the sub plate and remove from the mechanism.
  6) Remove 2 screws and dismantle P.W.B. Ass'y from the sub plate. (See Fig. 13)

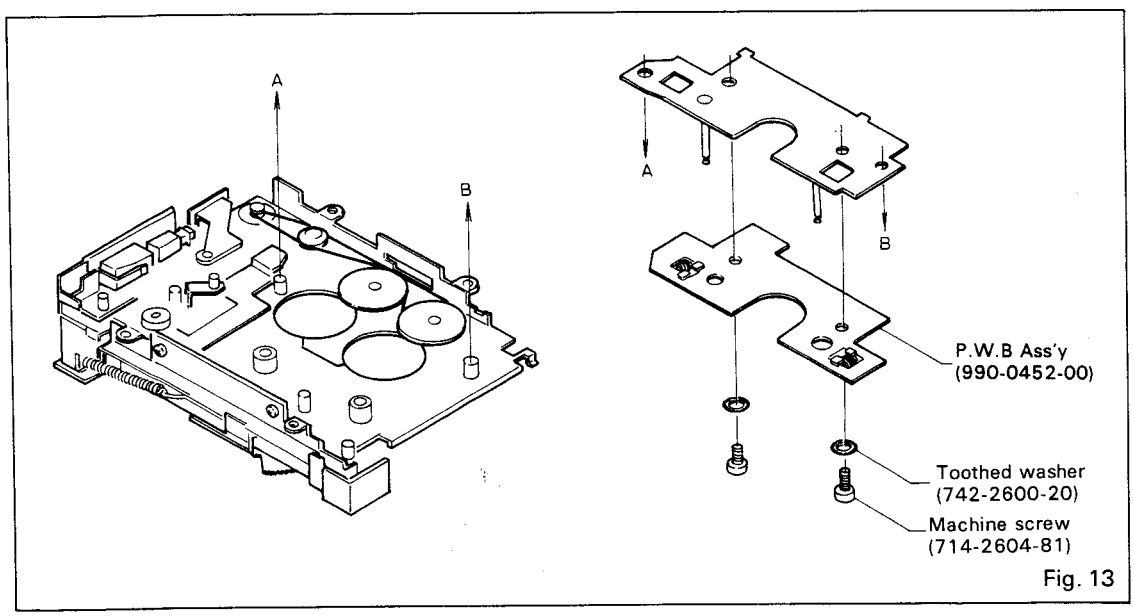
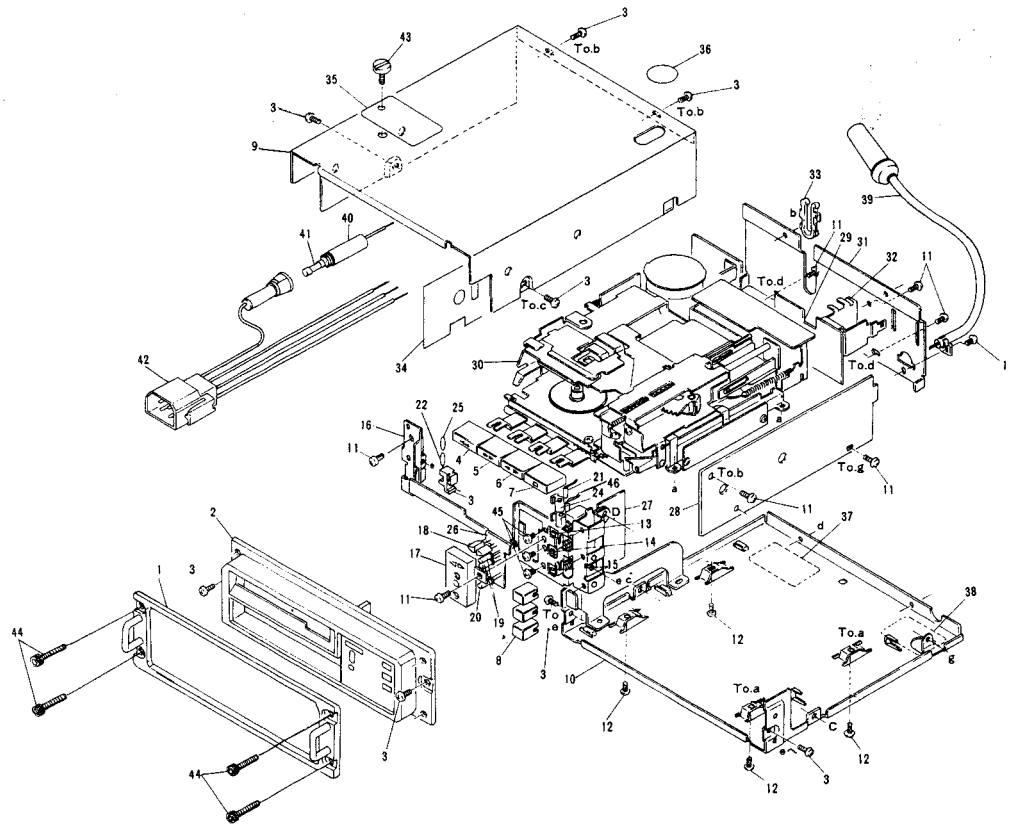


Fig. 13

■EXPLODED VIEW:

◎Main section



■PARTS LIST:

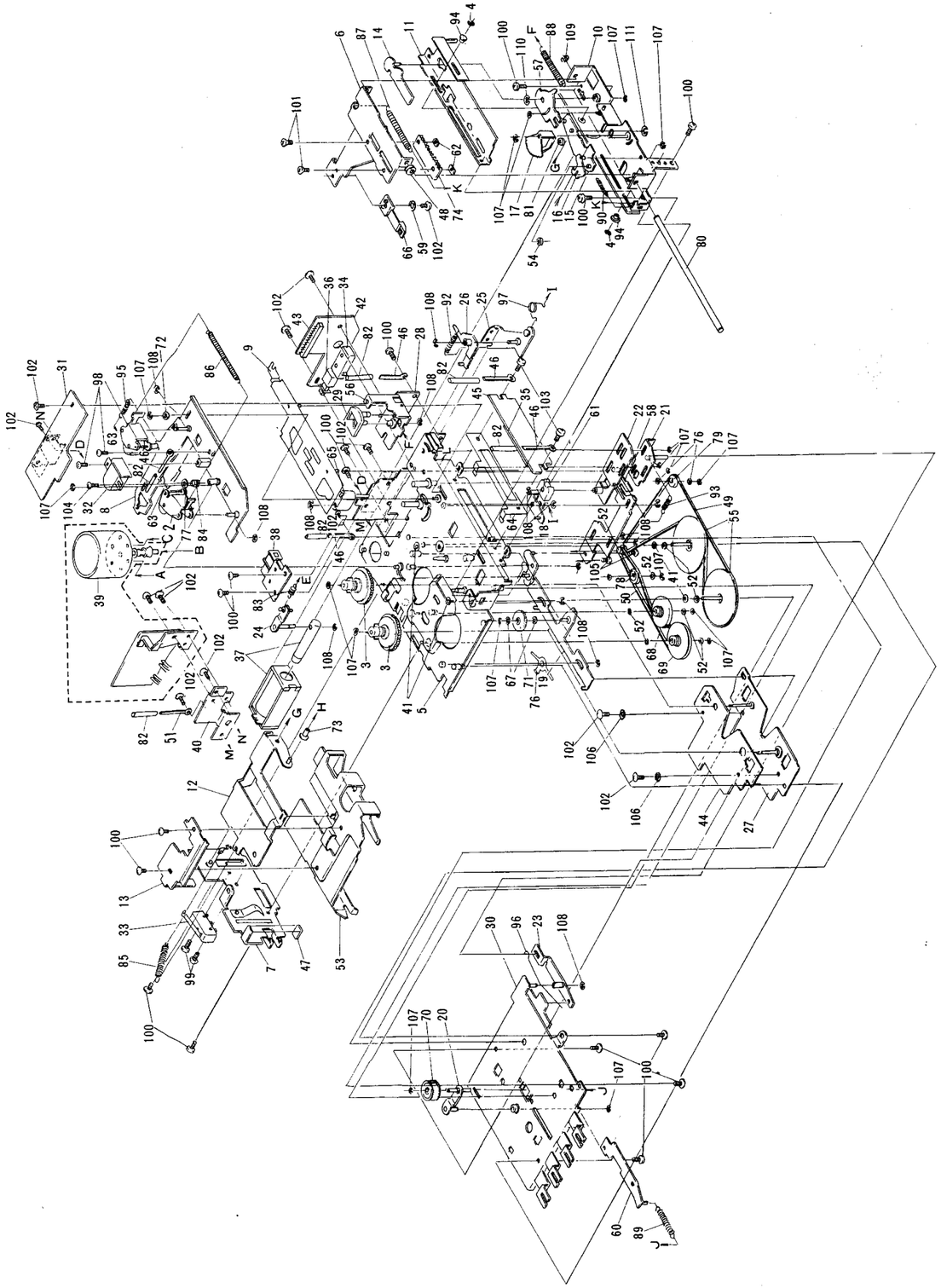
◎Main section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
1	940-0204A	Escutcheon ass'y	1
2	940-0203A	Escutcheon ass'y	1
3	731-3006-89	Tap tight (M3x6)	8
4	382-0155-11	Button (REW)	1
5	382-0155-10	Button (FF)	1
6	382-0155-09	Button (PLAY)	1
7	382-0155-08	Button (ST/EJ)	1
8	382-0154-01	Button	3
9	310-0959-01	Upper case	1
10	311-0966-01	Lower case	1
11	731-3006-80	Tap tight (M3x6)	8
12	732-3006-19	Sems screw (M3x6)	4
13	013-3421-02	Switch (PRO)	1
14	013-3441-03	Switch (EQ)	1
15	013-3346-03	Switch (DOLBY)	1
16	309-0349-01	Front plate	1
17	335-1057-00	Indicator holder	1
18	001-0240-00	Diode	2
19	001-0207-03	Diode	2
20	001-0207-00	Diode	1
21	017-0337-00	Pilot lamp	1
22	017-0338-04	Pilot lamp	1
23	345-3024-00	P.L holder	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
24	345-2947-01	P.L holder	2
25	345-2830-03	P.L cap	1
26	099-5880-00	P.W.B	1
27	099-5338-01	P.W.B	1
28	099-5860-00	P.W.B	1
29	099-5337-01	P.W.B	1
30	930-0459-11	Tape mechanism	1
31	307-0304-00	Rear cover	1
32	944-0536-00	Filter ass'y	1
33	335-0580-00	Lead holder	1
34	347-0822-01	Insulator paper	1
35	285-0674-00	Guide label (LOCK)	1
36	290-2567-00	Label	1
37	285-0656-00	Guide label (10MAX)	1
38	286-3678-00	Set plate	1
39	852-5930-01	Extension lead (DIN)	1
40	850-1822-02	A-lead	1
41	120-0050-00	Fuse (5A)	1
42	850-2018-00	A-lead	1
43	716-0316-00	Lock screw	1
44	716-0333-00	Ornamental screw (M3x15)	4
45	714-2604-81	Machine screw (M2.6x4)	3
46	017-0337-05	Pilot lamp	1

■EXPLODED VIEW:

◎Mechanism section



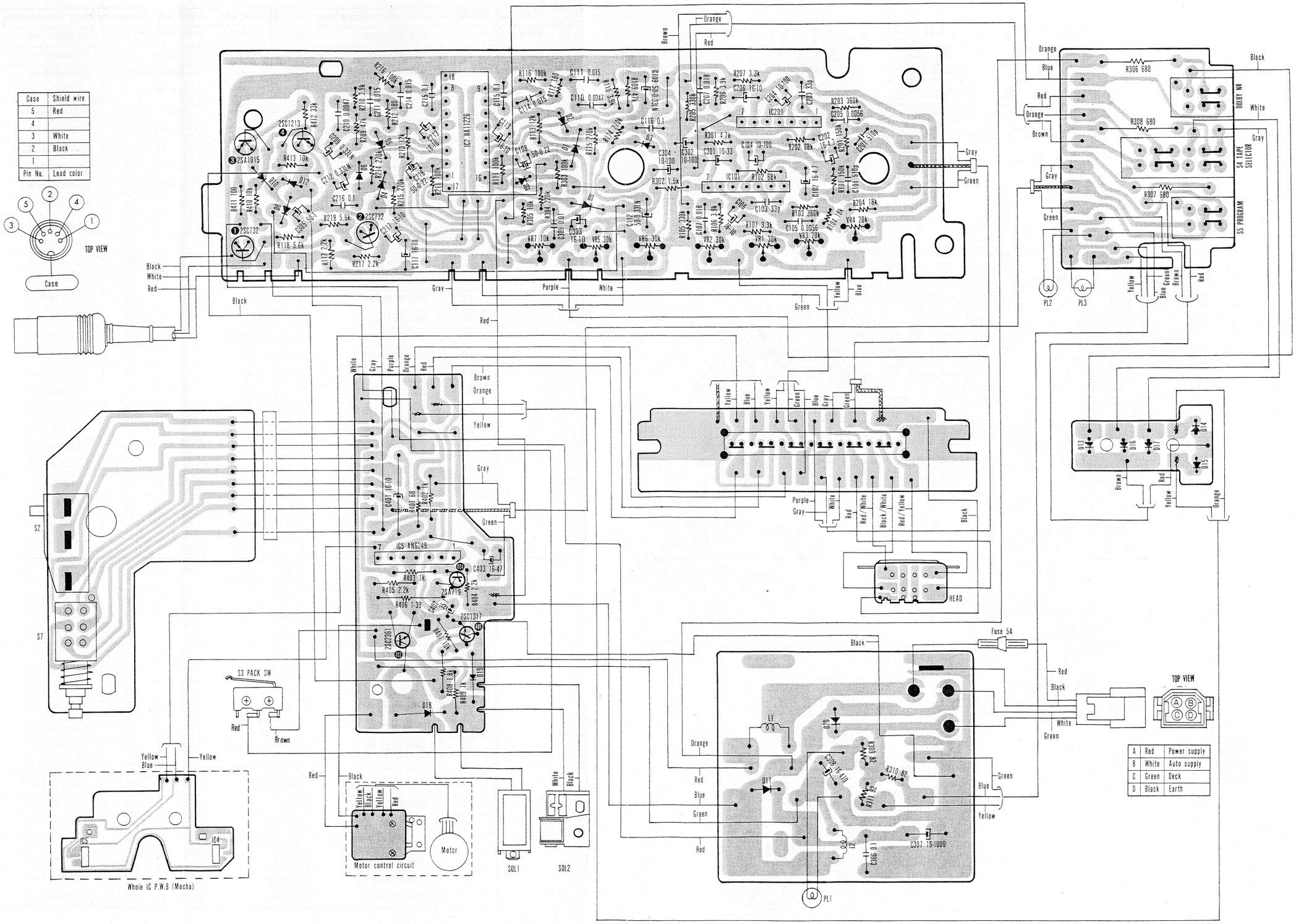
■PARTS LIST:

◎Mechanism section

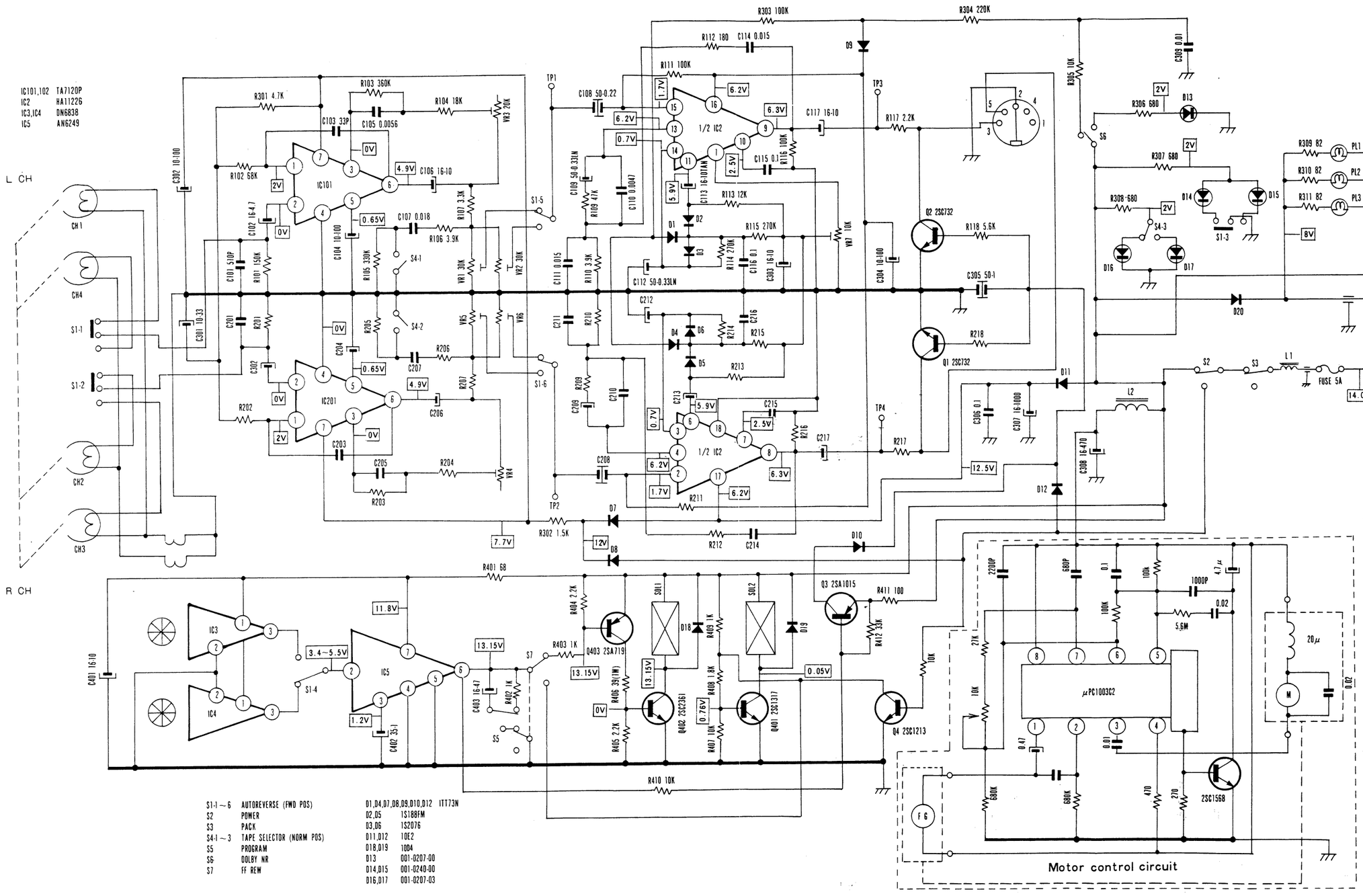
REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
1	960-3155-02	Roller F ass'y	1
2	960-3156-02	Roller R ass'y	1
3	960-3157-02	Reel base ass'y	2
4	744-0018-01	E-ring	2
5	960-3159-00	Deck plate ass'y	1
6	960-3160-02	Slide plate ass'y	1
7	960-3161-03	Side panel ass'y	1
8	960-3162-03	Head plate ass'y	1
9	960-3163-00	Change plate ass'y	1
10	960-3164-07	Frame ass'y	1
11	960-3165-03	Eject plate ass'y	1
12	960-3166-03	Guide arm ass'y	1
13	960-3167-03	Guide plate ass'y	1
14	960-3168-00	Lock plate ass'y	1
15	960-3169-01	Link A ass'y	1
16	960-3170-01	Link C ass'y	1
17	960-3171-00	Gear plate ass'y	1
18	960-3172-01	Play link ass'y	1
19	960-3173-01	Idler plate ass'y	1
20	960-3174-00	FF plate ass'y	1
21	960-3175-02	Switch lever ass'y	1
22	960-3176-01	Plunger plate ass'y	1
23	960-3177-03	Lock arm ass'y	1
24	960-3178-00	Cam plate ass'y	1
25	960-3179-02	SW plate A ass'y	1
26	960-3180-00	SW plate B ass'y	1
27	960-3181-03	Sub plate ass'y	1
28	960-3182-00	Base plate ass'y	1
29	960-3183-00	Cam ass'y	1
30	960-3184-07	Bottom sub ass'y	1
31	099-5299-00	P.W.B	1
32	011-0263-00	Head	1
33	013-2690-03	Switch	1
34	013-3476-00	Switch	1
35	013-3397-00	Switch	1
36	013-3444-01	Switch	1
37	015-0225-00	Plunger	1
38	015-0227-00	Plunger	1
39	960-3235-00	DC motor ass'y	1
40	630-1244-01	P.W.B bracket	1
41	746-0688-01	Flat washer	4
42	076-0158-09	Plug	1
43	099-5300-02	P.W.B	1
44	990-0452-00	Whole IC board ass'y	1
45	099-5302-01	P.W.B	1
46	330-4896-00	Clamper	5
47	340-0398-00	Spacer	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
48	345-2651-00	Spacer	1
49	602-0054-01	Belt A	1
50	602-0055-00	Belt B	1
51	330-4896-00	Clamp	1
52	746-0624-00	Flat washer	10
53	606-0065-04	Pack guide	1
54	610-0089-00	Guide roller C	1
55	611-0056-01	Flywheel	2
56	630-0931-00	Plate spring	1
57	630-1157-01	Link D	1
58	630-1159-01	Connect plate	1
59	745-0591-00	Washer	1
60	630-1162-02	Eject lever	1
61	630-1198-03	Core	1
62	630-1199-00	Square nut	2
63	630-1200-00	Head sub plate	1
64	630-1201-01	Head plate spring	1
65	631-0300-00	Eject link	1
66	631-0301-04	Plate spring	1
67	746-0617-00	Washer	2
68	631-0303-00	Gear pulley F	1
69	631-0304-00	Gear pulley R	1
70	631-0305-00	FF idler gear	1
71	631-0306-00	Idler gear	1
72	631-0307-00	Head plate roller	1
73	610-0088-00	Guide roller B	1
74	631-0309-00	Rack	1
75	631-0310-01	Connect cam	1
76	630-1268-00	Plate spring	1
77	632-0871-00	Spacer	1
78	632-0880-00	Tension pulley	1
79	632-0881-00	Tension pulley	1
80	632-0882-00	Guide shaft	1
81	632-0883-01	Roller	1
82	820-4025-02	Vinyl tube	5
83	750-1819-00	Spring	1
84	750-1910-00	Spring	1
85	750-1923-03	Spring	1
86	750-1924-01	Spring	1
87	750-1925-03	Spring	1
88	750-1926-02	Spring	1
89	750-1927-03	Spring	1
90	750-1928-01	Spring	1
91	750-1929-02	Spring	1
92	750-1930-01	Spring	1
93	750-1931-02	Spring	1
94	610-0087-00	Guide roller A	2

■PRINTED WIRING BOARD:



■CIRCUIT DIAGRAM:



S1-1～6	AUTOREVERSE (FWD POS)
S2	POWER
S3	PACK
S4-1～3	TAPE SELECTOR (NORM POS)
S5	PROGRAM
S6	DOLBY NR
S7	FF REW

D1,D4,D7,D8,D9,D10,D12	ITT73N
D2,D5	1S1886FM
D3,D6	1S2076
D11,D12	10E2
D18,D19	10D4
D13	001-0207-00
D14,D15	001-0240-00
D16,D17	001-0207-03

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
95	750-1938-01	Spring	1
96	750-1950-00	Spring	1
97	750-1951-00	Spring	1
98	714-2003-81	Machine screw (M2x3)	2
99	714-2310-81	Machine screw (M2.3x10)	1
100	714-2603-81	Machine screw (M2.6x3)	15
101	714-2604-41	Machine screw (M2.6x4)	1
102	714-2604-81	Machine screw (M2.6x4)	14
103	714-2605-81	Machine screw (M2.6x5)	2

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
104	716-0286-00	Screw (M2x4) (P=0.25)	1
105	716-0347-00	Screw (M2.6)	2
106	742-2600-20	Toothed washer	2
107	743-1500-10	E-ring (M1.5)	21
108	743-2000-10	E-ring (M2)	13
109	743-2500-10	E-ring (M2.5)	2
110	743-3000-10	E-ring (M3)	1
111	744-0006-01	E-ring (M2)	3

■PARTS LIST:

◎Electrical section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
$D_{3,6}$	001-0095-00	Diode (1S2076)	2
$D_{2,5}$	001-0180-00	Diode (1S188FM)	2
$D_{11,20}$	001-0186-00	Diode (10E2)	2
D_{13}	001-0207-00	Diode (DOLBY)	1
$D_{16,17}$	001-0207-03	Diode (TAPE)	2
$D_{1,4,7,8,9,10,12}$	001-0208-00	Diode (ITT73N)	7
$D_{14,15}$	001-0240-00	Diode (PRO)	2
L_2	009-0470-02	Choke	1
L_1	009-0592-01	Choke	1
VR_7	012-3550-02	Variable resistor (10kΩ)	1
$VR_{1,2,5,6}$	012-3550-04	Variable resistor (30kΩ)	4
$VR_{3,4}$	012-3550-06	Variable resistor (20kΩ)	2
$IC_{101,201}$	051-0020-00	IC (TA7120P)	2
IC_2	051-0118-00	IC (HA11226)	1
Q_3	100-1015-15	Transistor (2SA1015-O)	1
$Q_{1,2}$	102-0732-27	Transistor (2SC732BL)	2
Q_4	102-1213-02	Transistor (2SC1213B)	1
$R_{110,210}$	032-0037-00	Film resistor (¼W3.9kΩ)	2
$R_{117,217}$	032-0059-02	Film resistor (¼Ws2.2kΩ)	2
R_{411}	111-1011-22	Film resistor (¼Ws100Ω)	1
$R_{305,410}$	111-1031-22	Film resistor (¼Ws10kΩ)	2
R_{413}	111-1031-32	Film resistor (¼W10kΩ)	1
$R_{111,211}$	111-1041-12	Film resistor (⅛W100kΩ)	2
$R_{116,216}$	111-1041-22	Film resistor (¼Ws100kΩ)	2
R_{303}	111-1041-32	Film resistor (¼W100kΩ)	1
R_{113}	111-1231-12	Film resistor (⅛W12kΩ)	1
R_{213}	111-1231-22	Film resistor (¼Ws12kΩ)	1
R_{302}	111-1521-32	Film resistor (¼W1.5kΩ)	1
$R_{101,201}$	111-1541-12	Film resistor (⅛W150kΩ)	2
R_{112}	111-1811-12	Film resistor (⅛W180Ω)	1
R_{212}	111-1811-32	Film resistor (¼W180Ω)	1
R_{204}	111-1831-22	Film resistor (¼Ws18kΩ)	1
R_{104}	111-1831-32	Film resistor (¼W18kΩ)	1
R_{304}	111-2241-32	Film resistor (¼W220kΩ)	1
$R_{114,115,214}$	111-2741-22	Film resistor (¼Ws270kΩ)	3

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
R_{215}	111-2741-32	Film resistor (¼W270kΩ)	1
$R_{107,207}$	111-3321-12	Film resistor (⅛W3.3kΩ)	2
R_{412}	111-3331-22	Film resistor (¼Ws33kΩ)	1
$R_{105,205}$	111-3341-12	Film resistor (⅛W330kΩ)	2
$R_{103,203}$	111-3641-12	Film resistor (⅛W360kΩ)	2
$R_{106,206}$	111-3921-12	Film resistor (⅛W3.9kΩ)	2
R_{301}	111-4721-12	Film resistor (⅛W4.7kΩ)	1
$R_{109,209}$	111-4731-12	Film resistor (⅛W47kΩ)	2
R_{118}	111-5621-12	Film resistor (⅛W5.6kΩ)	1
R_{218}	111-5621-22	Film resistor (¼Ws5.6kΩ)	1
$R_{306,307,308}$	111-6811-41	Film resistor (½W680Ω)	3
R_{102}	111-6831-22	Film resistor (¼Ws68kΩ)	1
R_{202}	111-6831-32	Film resistor (¼W68kΩ)	1
$R_{309,310,311}$	114-8201-51	Film resistor (1W82Ω)	3
C_{309}	141-1032-10	Polyester capacitor (50V0.01μF)	1
C_{306}	141-1042-10	Polyester capacitor (50V0.1μF)	1
$C_{107,207}$	141-1832-10	Polyester capacitor (50V0.018μF)	2
$C_{101,201}$	141-5112-10	Polyester capacitor (50V510pF)	2
$C_{105,205}$	141-5622-10	Polyester capacitor (50V0.0056μF)	2
$C_{115,215}$	173-1041-19	Polyester capacitor (50V0.1μF)	2
$C_{116,216}$	173-1042-19	Polyester capacitor (50V0.1μF)	2
$C_{103,203}$	150-3302-13	Ceramic capacitor (33pFCH)	2
$C_{110,210}$	043-0068-03	Polystylen capacitor (0.0047μF)	2
$C_{111,114,211,214}$	043-0093-03	Polystylen capacitor (0.015μF)	4
$C_{108,208}$	042-0140-00	Electrolytic capacitor (50V0.22μF)	2
$C_{113,213}$	042-0176-00	Electrolytic capacitor (16V10μF TAN)	2
C_{307}	042-0214-00	Electrolytic capacitor (16V1000μF)	1
$C_{104,204,302,304}$	179-1073-22	Electrolytic capacitor (10V100μF)	4
C_{301}	179-3363-22	Electrolytic capacitor (10V33μF)	1
C_{305}	180-1054-62	Electrolytic capacitor (50V1μF)	1
$C_{303}^{106,117,206,217}$	180-1064-32	Electrolytic capacitor (16V10μF)	5
$C_{102,202}$	180-4754-42	Electrolytic capacitor (25V4.7μF)	2
C_{308}	180-4774-32	Electrolytic capacitor (16V470μF)	1
$C_{109,112,209,212}$	181-3343-62	Electrolytic capacitor (50V0.33μF LN)	4

◎Mechanism electrical section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
$D_{18,19}$	001-0077-00	Diode (10D4)	2
C_{402}	042-0186-02	Tantalum capacitor (35V1μF)	1
IC_5	051-0192-00	IC (AN6249)	1
Q_{401}	102-1317-18	Transistor (2SC1317R or Q)	1
Q_{402}	102-2361-16	Transistor (2SC2361P or Q)	1
Q_{403}	100-0719-99	Transistor (2SA719)	1
C_{401}	180-1064-31	Electrolytic capacitor (16V10μF)	2

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
C_{403}	181-4763-32	Electrolytic capacitor (16V47μF)	1
$R_{402,403,409}$	111-1021-21	Film resistor (¼Ws1kΩ)	3
R_{407}	111-1031-21	Film resistor (¼Ws10kΩ)	1
R_{408}	111-1821-21	Film resistor (¼Ws1.8kΩ)	1
$R_{404,405}$	111-2221-21	Film resistor (¼Ws2.2kΩ)	2
R_{401}	111-6801-21	Film resistor (¼Ws68Ω)	1
R_{406}	114-3901-51	Film resistor (1W39Ω)	1